



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,428	09/23/2003	Carlos Ricci	279.B16US1	2367
21186	7590	06/26/2006	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.			ROBERTS, DARIN	
P.O. BOX 2938			ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55402			3762	

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/668,428

Applicant(s)

RICCI ET AL.

Examiner

Darin R. Roberts

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-10 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/12/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 & 6-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Roberts et al. (US 2002083025 A1).

In reference to **claims 1, 2, 3, & 4**, the Roberts et al. publication teaches the use of a system providing capable of adaptive medical therapies utilizing a neural network based learning engine and applying such a device to a cardiac patient (see pp. [0086] & pp. [0224]. The aforementioned system comprising a cardiac device module for providing adaptive medical therapies to the patient, the cardiac device module comprises a cardiac device data collection module for collecting patient data associated with the cardiac health state of the patient's heart (see pp. [0086] and pp. [0087]). The Roberts et al. publication also teaches the use of a neural network module for processing collected patient data to determine the corrective medical therapies to be applied using the cardiac therapy module as well as an artificial neural network processing module for training and validating the operation of a neural network (see pp. [0224]). The Roberts publication teaches the use of a cardiac neural network training module for processing collected patient data and is inherently capable of determining a

Art Unit: 3762

set of operating coefficients used by the artificial neural network when determining optimal treatment therapies (see pp. [0223], pp. [0224], & pp. [0266]) as well as a cardiac device that would inherently possess an interface module of some sort for receiving collected patient data from the cardiac device module. The Robarts et al publication also teaches transmitting data sets used by the artificial neural network when determining optimal treatment therapies (see pp. [0051]), and the use of a data store for maintaining patient collected data history (see pp. [0301]), and a communications link between the cardiac device module and the artificial neural network processing module wherein the cardiac device neural network module and the neural network training module implement networks of nodes (see pp. [0090]).

In reference to **claim 6**, the Robarts et al. publication teaches the use of a system according to wherein an artificial neural network processing module a user interface module for providing a medical technician with an ability to interact with the artificial neural network processing module and to input data associated with optimal treatment therapies into the artificial neural network processing module (see abstract).

In reference to **claim 7**, the Robarts et al. publication teaches the utilization of cardiac interface module referred to as a defibrillator (see pp. [0086]).

In reference to **claim 8**, the Robarts et al. publication teaches a system wherein the communications link between the cardiac device module and the artificial neural network processing module is used to transmit collected patient data and the set of operating coefficients used by the artificial neural network when determining optimal

treatment therapies between the cardiac device module and the artificial neural network processing module (see pp. [0086] & pp. [0224]).

In reference to **claims 9 & 10**, the Robarts et al. teaches the use of a wireless RF communication channel, this wireless RF channel is capable of performing the same functions as the optical channel and thus is a functional equivalent of said optical connection (see pp. [0056]).

Allowable Subject Matter

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Examiner also wishes to cite El-Solh et al. (US 6839581 B1) & Groth et al. (US 6443889 B1) because both mention the use of neural network in conjunction with an IMD to further enhance treatment of cardiac malfunctions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darin R. Roberts whose telephone number is (571) 272-5558. The examiner can normally be reached on 7:30am to 4:00pm.


Art Unit: 3762

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Darin Roberts
Patent Examiner
Art Unit 3762

D. R.


Jeffrey Jastrab
Primary Examiner
Art Unit 3762

6/22/06